THE
VETERINARY JOURNAL

Editor :
FREDERICK HOBDAY, C.M.G., F.R.C.V.S., F.R.S.E.,
HONORARY VETERINARY SURGEON TO HIS MAJESTY THE KING.
OFFICIER DU MERITE AGRICOLE (FRANCE).
CAVALIERE DEI S. S. MAURIZIO E LAZZARO (ITALY).
HONORARY MEMBER OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION.
AND FORMERLY PROFESSOR IN THE ROYAL VETERINARY COLLEGE, LONDON.

Sub-Editor :
GLADSTONE MAYALL, M.R.C.V.S.

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Editorials.

COLONIAL SALARIES.

In this issue we have devoted a number of pages to a Government report which is of the greatest interest to the whole of the members of our profession, whether recent graduates, or those who have attained an established position, and it is a pity that the Indian Veterinary Civil Service could not have been included in the same enquiry. For those who are on the threshold of a career they give the pecuniary prospect clearly defined from the start to the top of the ladder ; and for the older men, who are in practice in England, they form food for reflection. To those who feel that they cannot adapt themselves to the routine of practice, or who prefer a Government career, these pages will afford much useful information. Some climates are more unhealthy and uncomfortable than others, and, as a rule, for them the rate of pay is higher and the terms of service before pension day comes along is shorter. The first essential of all must be the liking for a Colonial life, but our young graduates must not forget that the salary has to be commensurate with a white man's status ; for out there certain rules of life are essentially to be followed, or one will be left to one's own society in comparative poverty.

Certainly some of the salaries and prospective increases do not appear enough as times are nowadays, and, comparing them with others of the Civil Services, the rate of increase is insufficient. One must not forget that before entering the Veterinary Service a man has to undergo a training, which has not only taken at least five of his best years without a salary, but has actually cost him in out-of-

pocket expenses approximately a thousand pounds. Not only is he handicapped by entering the lists comparatively late in life, his student days not counting towards pension, but he has actually expended a large sum of money in the effort of training, so that he is entitled to expect a salary at the commencement in proportion to the sacrifices he has made. Many expert veterinarians are urgently needed *at once* for our Colonial Services, and the best men will apply if the inducements offered are fair and satisfactory. The prosperity of our Colonies depends largely on the health of their agricultural stock, and to maintain that health the veterinarian is essential. The question of a reasonable and satisfactory pay depends entirely upon ourselves and our response or our boycott.

R.A.V.C. OFFICERS AND THE REMOUNT DEPARTMENT.

THE question recently asked in Parliament by Lieut.-Colonel Burgoyne (and quoted on a subsequent page) as to the appointment of a Veterinary officer to the Head of the Remount Department is one which concerns not only the members of the Royal Army Veterinary Corps, but to a very much larger extent, the British taxpayer; and the further question in which Col. Burgoyne asked the Secretary of State for War "What are the duties performed by Remount officers which could not efficiently and more economically be carried out by the Royal Army Veterinary Corps?" is of more interest to us still. As a matter of fact, a great deal of economy could be made by transferring the duties of the Remount Service to the Veterinary Service, and thousands of the British taxpayers' money could be saved every year. Take, for example, as one instance only, the duplication of officers in a Remount Depot. At the present time the Remount Depots have, of necessity, a Veterinary Officer attached in order to at once detect diseases (especially the contagious varieties) at their commencement. He is not supposed to treat them, when once segregated, for any length of time, but to evacuate them to a Veterinary Hospital (which is usually in the same neighbourhood); so that, except for prophylactic purposes, his duties are light. That officers of the R.A.V.C. are able to organise and command large camps was well illustrated during the late war, and that they also possessed tact and business acumen was shown by their management of the sales and disposal of the horses at the end of the war. *A Veterinary Officer is, by his training in the management of health and disease, the best fitted of all the services to command and manage a Remount Depot;* and there is absolutely no need for 113 extra officers, at an expense to the country of £75,000 a year, to purchase annually a matter of

only about 2,000 animals! According to the Army Estimates, the cost of the Remount Service for 1920-21 is as follows:

Remounts Directorate	£4,156
Inspectors of Remounts	£3,080
Deputy Assistant Inspectors of Remounts	£14,360
District Remount Officers	£38,697
Personnel of Four Remount Depots, as laid down in the Peace Establishment (cost of pay and rations only) and presumably shown in Army Estimates under R.A.S.C. vote	£12,200
Four Commanding Officers at £612 per annum each	£2,448
	£74,946

Seventy-four thousand, nine hundred and forty-six pounds per annum for the purchase of about 2,000 animals a year! *It is not business, and is an unnecessary, wasteful expenditure, which is quite avoidable.* Let the horses when purchased be handed over to the care of the Veterinary Service, whose duty it is to keep the animals of the Army free from disease, and thus save the British taxpayer the major portion of the above £74,946. It is feasible and practicable, for the one service can be reduced or almost done without, but the other, wherever animals are to be kept in health, is a necessity. Under the present system there is a wasteful and totally unnecessary duplication both of officers and salaries.

ANIMAL LOSSES DURING THE GREAT WAR.

THE Veterinary Section of the Imperial War Museum at the Crystal Palace has compiled statistics of the animal casualties throughout the war. These show that the deaths were much lower than in any previous war, being less than 15 per cent. per annum.

484,143 animals lost their lives, this including 5,589 lost at sea. In the Dardanelles 13,864 died, and out of 120,013 camels employed, 28,812 lost their lives on service. In Mesopotamia alone in the last year of the war, 86.52 per cent. of the camels used there died. Only 1.06 per cent. lost their lives on the sea journey, and this in itself speaks volumes for the veterinary supervision both before and during transport.

In 1914 the average strength was 204,628 animals and of these 15.23 per cent. were on the sick list, the actual number of fatalities from all causes being 17,637.

LIBRARY ALABAMA

In 1915 there were 483,134 animals on the average strength, the sickness percentage being reduced to 10.37 per cent. and in no subsequent year did it mount up beyond 11.44 per cent., although in 1917 and 1918 the average annual strengths were 966,840 and 827,506, respectively.

This speaks volumes for the veterinary organisation and the methods taken by the Royal Army Veterinary Corps, and shows clearly the enormous financial salvage which resulted to the nation as a consequence. In fact, it is impossible to contemplate the absolute collapse which must inevitably have occurred had not this care and trouble been taken under the directions of the skilled and properly qualified veterinary advisers.

ABSTRACT FROM THE REPORT OF THE COMMITTEE APPOINTED BY THE SECRETARY OF STATE FOR THE COLONIES TO CONSIDER THE STAFFING OF THE VETERINARY DEPARTMENTS IN THE COLONIES AND PROTECTORATES.

THE Committee appointed by the Secretary of State for the Colonies to consider the staffing of the Veterinary Departments in the Colonies and Protectorates consisted of :—

SIR HERBERT J. READ, K.C.M.G., C.B., Assistant Under-Secretary, Colonial Office (*Chairman*).

SIR JOHN M'FADYEAN, M.B., B.Sc., M.R.C.V.S., LL.D., Principal of the Royal Veterinary College, London.

SIR STEWART STOCKMAN, M.R.C.V.S., Chief Veterinary Adviser to the Ministry of Agriculture.

THE PRESIDENT OF THE ROYAL COLLEGE OF VETERINARY SURGEONS (Mr. J. McKinna, F.R.C.V.S.).

PROF. O. CHARNOCK BRADLEY, M.D., D.Sc., M.R.C.V.S., Principal of the Royal (Dick) Veterinary College, Edinburgh.

PROF. J. SHARE JONES, D.V.Sc., M.Sc., F.R.C.V.S., Director of Veterinary Education and Professor of Veterinary Anatomy in the University of Liverpool.

MAJOR R. D. FURSE, D.S.O., Assistant Private Secretary (Appointments), Colonial Office.

The terms of reference were :—

(*a*) To consider whether the Staffs of the Veterinary Departments in the various Colonies and Protectorates are adequate, and, if necessary, to recommend increases of staff ;

(*b*) To consider whether the rates of salary offered to the Veterinary Staffs are adequate, and, if necessary, to suggest improvements

(*c*) To make recommendations for improving the arrangements for recruiting Veterinary Staffs for the Colonies and Protectorates.

RECOMMENDATIONS OF THE COMMITTEE FOR INCREASES OF STAFF AND RATES OF SALARY.

East Africa.

(i) *The East Africa Protectorate.*

1 Chief Veterinary Officer ..	£1,000.
1 Deputy Chief Vet. Officer ..	£800.
5 Senior Veterinary Officers ..	£600—£25—£700.
9 Veterinary Officers	£500—£25—£600.
1 Veterinary Pathologist ..	£900.
1st Assistant Vet. Pathologist ..	£700.
2nd ,, ,, ,, ..	£600—£25—£700.
3rd ,, ,, ,, ..	£500—£25—£600.
19 Inspectors	£250—£15—£400.
1 Laboratory Superintendent ..	£400—£20—£500.
2 European Lab. Assistants ..	£300—£15—£400.
2 ,, ,, ,, ..	£250—£15—£300.
2 Lay Field Assistants	£250—£15—£300.
1 Permit Officer	£300—£15—£400.

(ii) *Uganda.*

1 Chief Veterinary Officer ..	£900.
1 Deputy Chief Vet. Officer ..	£750.
3 Senior Veterinary Officers ..	£600—£25—£700.
5 Veterinary Officers	£500—£25—£600.
1 Veterinary Pathologist ..	£800.
1 Laboratory Superintendent ..	£400—£25—£500.
1 Laboratory Assistant	£300—£15—£400.
5 Inspectors	£250—£15—£400.

(iii) *Nyassaland.*

1 Chief Veterinary Officer ..	£750.
1 Veterinary Officer	£600—£25—£700.
1 ,, ,, ...	£500—£25—£600.

West Africa.

(i) *The Gold Coast.*

1 Chief Veterinary Officer ..	£960+£96 duty allowance.
1 Veterinary Officer	£480—£30—£750+£96 duty allowance.
1 Assistant Veterinary Officer ..	£480—£30—£600+£96 duty allowance.

In the case of the Veterinary Officer the Committee recommend that a break in the incremental scale should occur at £600, further

increases being conditional on the attainment by the officer of a satisfactory degree of efficiency and otherwise dependent on the Governor's discretion.

(ii) *Sierra Leone.*

1 Veterinary Officer .. .. £500—£25—£600.

The Committee further recommend that a capable veterinary officer should be selected, with a salary of £750 a year, to visit both Sierra Leone and the Gambia and to report on the veterinary possibilities and requirements of both countries.

Cyprus.

1 Veterinary Officer .. .. £400—£25—£500.

The Committee agreed that the existing rate of salary paid to the Veterinary Officer in Cyprus, viz., £250—£10—£300 was inadequate. It has been represented to them that he is permitted to engage in the private practice of his profession, but they consider that, unless enquiry should elicit the fact that the value of such private practice is more considerable than they believe to be the case, salary should be paid to this officer at the rate now recommended.

Fiji.

The Committee recommend that the Veterinary Officer in Fiji should receive a salary of £750 a year. He has on his staff five Stock Inspectors and some Indian assistants, his emoluments being a salary of £500 a year, a house allowance at the rate of £50 a year, and a temporary war bonus. The Committee are of opinion that this rate of salary calls for improvement, and they recommend that it should be raised to the figure stated.

In Certain Colonies no Revision Necessary.

In the case of certain Colonies, your Committee decided after consideration that the present veterinary staffs and rates of salary do not stand in need of revision. These Colonies were the following :— Zanzibar, the Straits Settlements, the Federated Malay States and Mauritius ; Trinidad, Bermuda and Barbados ; the Falkland Islands. The existing veterinary establishments and rates of salary are shown in the Appendix to this Report.

Nigeria, Tanganyika and the Windward Islands.

On coming to the cases of Nigeria, the Tanganyika Territory and the Windward Islands, your Committee were informed that the situation in these countries with regard to veterinary matters was already the subject of correspondence between the Secretary of State and the local Governments. As regards the Tanganyika Territory, the Committee learn that the Secretary of State is awaiting proposals, which the Administrator is about to submit for the establishment of a permanent veterinary department ; in the meantime they do not feel

themselves to be in a position to make suggestions as to the veterinary staff which this former German Colony will require. They wish, however, to recommend that, in the grading of the personnel and the providing of appropriate salaries, the principle should be observed of securing as great a degree of uniformity as possible between the Tanganyika Territory and the Protectorates of Eastern Africa. In St. Lucia there has not hitherto been a Veterinary Officer paid entirely from Government funds ; but the Committee understand that the question of creating such an appointment is now under consideration. In the event of this question being decided in the affirmative, they would suggest that £400—£20—£500 a year would be a suitable scale of salary. They are aware that this rate of salary is lower than that recommended in the majority of cases, but they consider that, as a Veterinary Officer in St. Lucia would enjoy opportunities of adding to his official emoluments by private practice, his services would be adequately remunerated by the salary proposed.

CEYLON, BRITISH GUIANA, JAMAICA, LEEWARD ISLANDS : LITTLE INFORMATION AVAILABLE.

In the cases of Ceylon, British Guiana, Jamaica and the Leeward Islands, your Committee are of the opinion that the information available concerning the present situation and future possibilities in respect of veterinary matters, is not sufficiently detailed to enable them to determine whether the existing veterinary staffs are adequate to carry on the work, nor whether they receive suitable salaries.

GROUNDS FOR RECOMMENDING INCREASES OF STAFF.

It will doubtless be remarked that your Committee have formed the opinion that in several cases, particularly that of the East Africa Protectorate, the existing veterinary staffs are inadequate to cope with the work demanded of them. Your Committee have, therefore, recommended a considerable increase in personnel as well as an appreciable improvement in the salaries to be offered. They put forward these recommendations with the less hesitation inasmuch as they feel confident that the additional expense which would be entailed by their adoption would be amply recompensed by their results. The Committee venture to say that, in their opinion, the importance of the stock industry to East Africa has not hitherto been fully recognised ; and they wish to associate themselves cordially with the views of Major-General Sir E. Northey, who regards cattle-rearing as the paramount industry of the Protectorate which he governs. If this be the case, no argument is needed to show that the prosperity of the Protectorate is largely bound up with the well-being of its animal population ; and it should evidently be among the proper functions of the Government to provide a Veterinary Department sufficiently

strong to ensure the competent care and supervision of the country's live-stock.

Importance of Uganda.

The same considerations may be held to apply to the Tanganyika Territory and Uganda. Indeed, a particular feature of the position of Uganda is that very many of the diseases which are rife amongst the live-stock of East Africa originate in that Protectorate.

The Third Term of Reference.

We come now to the third term of reference which is "to make recommendations for improving the arrangements for recruiting Veterinary Staffs."

Your Committee beg to report that, in present circumstances, the only practicable measure which they can suggest is to offer the improved rates of salary recommended in the preceding sections. It should be remembered that the shortage of qualified veterinary surgeons, which was already pronounced before the war, has become accentuated by the interruption which the war has caused in the course of studies for the veterinary diploma. Until those students who have entered the veterinary colleges subsequently to their release from military duties begin to pass out from the colleges and universities on the completion of their studies, it is inevitable that the numbers of veterinary surgeons from whom the veterinary staffs of the Colonies and Protectorates can be recruited will continue to be very limited. Your Committee consider that so long as these abnormal conditions prevail, the means adopted to recruit veterinary personnel must necessarily take the form of "ad hoc" measures devised to meet special local requirements or to combat particular emergencies. Even so, they venture to hope that the adoption of the more generous scales of salary would not be without result in attracting a larger number of veterinary candidates to the Colonial Service.

Separate Veterinary Departments Recommended.

It has been the intention of your Committee in recommending increased veterinary staffs, to indicate the strength at which it should be the aim of local Governments to maintain their veterinary personnel in order to secure the due performance of the work which is necessary, both in the laboratory and in the field, if the stock industry is to progress and all the interests dependent on it are to flourish. The Committee found that in nearly all the Colonies and Protectorates which they have considered the Veterinary Departments are at present branches of the Agricultural Departments. They desire to recommend that in future veterinary and agricultural work shall be regarded as

distinct, and that the veterinary interests of the Colonies and Protectorates shall be entrusted to separate Veterinary Departments.

GROUNDS FOR RECOMMENDING INCREASES OF SALARY.

As regards the increased rates of salary recommended, it has been the aim of your Committee to propose such rates as may reasonably be offered to veterinary surgeons of real ability and scientific interests. The initial salaries suggested are considered to be suitable for a recently qualified veterinary surgeon taking his first step in a Colonial career. Your Committee trust that, with the increase of veterinary staffs and salaries and the enlargement of veterinary activities in the Colonies, the veterinary student may more fully realise the possibility offered him by the Colonial Service of making a career for himself. He should not forget that the opportunities of research which are met with in the tropical and sub-tropical Colonies are such as may well appeal to the ambitious student, inasmuch as, if utilised in due measure by carefully chosen veterinarians, they might well open the way to the advancement not only of the interests of the Colonies themselves, but also that of Veterinary science throughout the world.

IMPORTANCE OF CONTINUITY OF SERVICE IN VETERINARY DEPARTMENTS

More important, however, than the question of inducing veterinary officers to enter the Colonial Service is that of ensuring that they shall remain in the Service once entered, and go forward contentedly and whole-heartedly in the career which they have chosen. Your Committee hope that the new grading of veterinary appointments which they recommend, with the improved salaries which they propose should be attached to them, will prove effectual in securing that continuity of service among veterinary officers, the lack of which has retarded veterinary development in the past and would certainly be fraught with the same evil in the future.

INTERCHANGEABILITY OF STAFF RECOMMENDED.

With a view to offering brighter prospects of promotion and advancement to the members of the smaller veterinary departments, your Committee recommend that, where possible, the system should be introduced whereby the staffs of neighbouring Colonies and Protectorates would be interchangeable. This would secure to all officers of those departments the prospect of rising to higher and more responsible positions, wherein not only would the remuneration earned be greater but their work also would be more scientifically valuable.

APPOINTMENT OF A DIRECTOR OF VETERINARY RESEARCH AND ADMINISTRATION FOR EAST AFRICA, UGANDA AND TANGANYIKA CONSIDERED.

In addition, your Committee beg to report that they have considered a further question, which only remotely falls within the terms of the

subjects referred to them, namely, that of the appointment of a Director of Veterinary Research and Administration for the coterminous territories of East Africa and Uganda and Tanganyika. The Committeee are not unanimous as to the practicability of combining in the hands of a single Director the responsibility both for administration and for research over so vast an area ; but they are agreed that results beneficial to all three territories would accrue from the institution of some form of supreme authority which should guide the direction of research into the most fruitful channels, and co-ordinate to their combined advantage the administrative work of neighbouring veterinary departments all engaged in the handling of common tasks and the solution of similar problems.

August 18, 1920.

ADDENDUM TO PARAGRAPH 12.

Indeed, the Committee would venture to express their belief that the benefits resulting from such research would not be confined to Veterinary science, but would also have a most important bearing on the subject of Human Medicine. They would recommend that every encouragement should be given to the interchange of ideas between research workers in human and animal disease, in order that the whole Science of Medicine might have the full advantage of the discoveries made in both fields of study.

WEST INDIES AND FALKLAND ISLANDS.

Colony.	Office.	Emoluments.	Whether pensionable.	Whether private practice allowed.	Notes.
(1)	(2)	(3)	(4)	(5)	(6)
Barbados	Inspector of Imported Animals.	£150	No	Yes	Also receives fees (£114-6-3 during 1917-18) as Veterinary Surgeon to the Police.
Bermuda	Government Veterinary Officer.	£150	Uncertain	Uncertain	—
British Guiana.	Veterinary Surgeon.	£300-20-400, with £75 travelling allowance.	No	Yes	Receives additional £50 per annum as Inspector of Hackney Carriages, Veterinary Surgeon for Fire Brigade and Municipal Veterinary Surgeon to discharge duties defined under the Milk By-laws in Georgetown.

Colony.	Office..	Emoluments.	Whether pensionable.	Whether private practice allowed.	Notes.
(1)	(2)	(3)	(4)	(5)	(6)
Falkland Islands	Chief Inspector of Stock.	£350-20-450, with £50 horse allowance.	No	No	This appointment has recently been filled and the engagement is for a period of five years in the first instance. The duties amongst others comprise at least an annual visit to all farming stations in the Falkland Islands and the inspection of horses, cattle, sheep, &c., thereon, giving advice to the managers and farmers as regards their animals and live stock and treating the same where necessary.
Jamaica	Veterinary Surgeon	£450-25-550	Uncertain	See last column.	The office was previously known as Veterinary Consultant (with £150 per annum, fees and private practice), but the emoluments mentioned in column 3 have recently been sanctioned. It is contemplated that the holder should be a whole-time Government Officer, and be required to attend to all the Government stock, that the Government shall fix a scale of fees for services rendered other than to the Government, and that the Officer shall receive 25 per cent. of such fees, the balance being paid into General Revenue.
Leeward Islands, Antigua.	Inspector of Animals.	£115	No	Uncertain	Receives £75 as Inspector of Animals at the Public Market and also £40 as Veterinary Surgeon under the City Commissioners.
St. Kitts-Nevis	Government Veterinary Surgeon	£180	Uncertain	Yes	Salary includes travelling expenses in St. Kitts, but apparently not in Nevis, and covers all Government Veterinary work, inspection of imported animals, of Government stock, of meat, &c., without extra fees for Sunday or overtime work.

Colony.	Office.	Emoluments.	Whether pensionable.	Whether private practice allowed.	Notes.
(1)	(2)	(3)	(4)	(5)	(6)
Trinidad	Government Veterinary Surgeon and Examiner of Animals.	£300 and £50 transport expenses.	Yes	Uncertain	Holder also apparently receives £100 as Superintendent of Quarantine (Detention) Station for Animals. This post is vacant and the Governor reported in September, 1918, that the filling of the appointment was to be deferred until the details of the scheme for the reorganisation of the Department of Agriculture had been worked out.
Windward Islands, St. Vincent	Government Veterinary Surgeon.	£200 and £50 horse and travelling allowances.	Yes	Uncertain	This post has been permitted to lapse. The Estimates for 1920 mention that the holder resigned on June 15, 1918, and that the post has not been filled. The holder also drew £25 per annum as Rodent Examiner and Supervisor of Milk Supply.
St. Lucia	—	—	—	—	The question of the appointment of a Veterinary Officer has been raised and a further expression of the Governor's views is awaited. The emoluments suggested were salary of £300 per annum, with forage allowance of £45 per annum and the right to private practice, but it has been remarked that it is unlikely that it would be possible to secure a candidate from this country on these terms.

A Veterinary Surgeon (with salary at the rate of £382 per annum and transport expenses, but without private practice) was attached to the Imperial Department of Agriculture for the West Indies for a period of three years from June, 1911. The Commissioner did not recommend a renewal of the engagement on the ground that the general survey in view at the time of the appointment was virtually completed, and that the specific carrying out of remedial measures might best be entrusted to local veterinary officers resident in the several islands.

Clinical Cases.

REMARKS ON SEBORRHŒAL ECZEMA AND MALIGNANT VENEREAL DISEASE.*

By Dr. P. SACCO, O.B.E., Cavaliere Corona d'Italia.
(*Chief Veterinarian to the Province of Cremona, Italy.*)

In a district like the Cremonese, where malignant venereal disease prevails, especially in the covering season, at which time both breeders and veterinarians have under their observation those animals which are used exclusively for breeding, and any which may show even the most remote symptoms of the unlucky trypanosomiasis, it is easy to fall into an erroneous diagnosis in the presence of lesions which resemble those of malignant venereal disease. This occurred in the Commune of C.D., in the quarter P——, of this Province.

A mare (Fig. 1), covered by a Belgian stallion belonging to a large stud, displayed a cutaneous lesion in the region of the ribs and the right haunch, which took the form of many sores from 2 to 5 cm. broad; and although unaccompanied by specific symptoms in the genital organs, or by constitutional disturbance, made the veterinary inspector diagnose malignant venereal disease. The veterinarian, from the absolute resemblance of the aforementioned

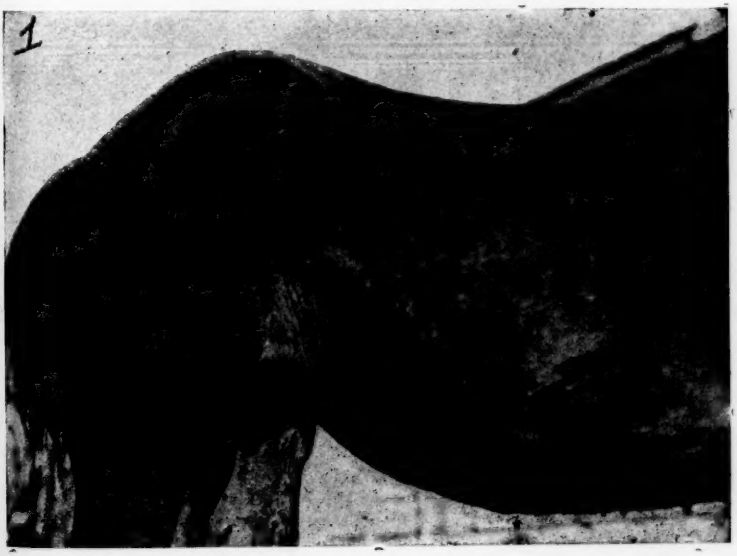


Fig. 1.

* Translated by Capt. H. L. Somers, late Royal Army Veterinary Corps.

sores to those occurring in malignant venereal disease, did not consider it necessary to extend his enquiries to the stallion, nor to the other animals in the stables of the stud, nor to those of owners in the vicinity. I was called in to certify to the reported case of malignant venereal disease, and at once noticed the great resemblance of the sores on the mare to those of malignant venereal disease. Desirous of getting to the bottom of the affair, I visited the stallion and found him quite healthy. In the stable adjacent to that of the mare whose case was reported I discovered that a form of cutaneous disorder had long existed, which attacked indiscriminately young or old horses, virgin mares and geldings. The proprietor told me that this skin disease manifested itself by the simultaneous appearance of a number of sores on some part of the body, preferably the trunk ; sores whose dimensions, number, and position remained unchanged for a long time, and all the longer in the absence of cleanliness and proper treatment.

In a four-year old virgin mare (Fig. 2) I found the malady in a more advanced state than in the case reported, the sores in this case were

FIG. 2.

quite separated from the cuticle, and were formed by the massing of the hairs agglutinated at their base by a wet, fatty secretion, not unlike pus.

With removal of the sores the denuded area was free from any cutaneous lesion, and when washed and treated with detergents, became nearly normal and only slightly congested. In an eight-year

old gelding (Fig. 3) I observed traces of the lesion in its final stage, that is to say, after the sores had fallen, leaving the parts bare, with a normal cuticle and the hair beginning to grow. Finally, in two foals of about one year old (one male and one female) I observed traces of the lesions completely cured, easily noticeable from the fact that the fresh hair was lighter, both in texture and in colour, than the rest of the coat and of unusual length, so that it seemed as though there were a patch where the sores had been. The owner informed me that this unwholesome condition had existed for fully 12 years in his stable,

FIG. 3.

and that it was easily cured by treatment with an ointment of Icthyol. He also told me that from many trials made by him he was never able to transmit the disease from one animal to another by allowing the matter which fell from the sores to fall on the skins of healthy animals.

From the observations made I was able unhesitatingly to exclude the existence of malignant venereal disease, and declare to the owner that the cases were "eczema seborrhoicum," a disease I encountered for the first time in 25 years of the exercise of my profession, and unknown to all the veterinarians of the district with whom I had occasion to discuss the circumstances. I consider my colleague's mistaken diagnosis as fully justified from the great resemblance of the sores to those of malignant venereal disease, and as the opportunities for observation and enquiry which I had were not open to him.

I consider it useful to publish these facts, together with the photographs of the lesions in their various stages for the guidance of my colleagues to whom analogous cases might occur. For the differential diagnosis between malignant venereal disease and seborrhœal eczema it should always be borne in mind that the cutaneous sores produced by the trypanosoma equiperdum do not last long, leave no traces on the cuticle after they disappear, and are always preceded by specific lesions in the genital organs ; also (very important for a correct diagnosis) are always of an œdematous character.—(From *La Clinica Veterinaria, No.* 12, 1920.)

DEMODECTIC SCABIES IN THE HORSE.

By BT. MAJOR G. WILLIAMSON, R.A.V.C.,
AND CAPT. G. E. OXSPRING, R.A.V.C.

THE Demodex Equi on the skin of horses produces a condition which, although well recognised in the Army, does not seem to be so familiar to the general practitioner.

In his "Studies on Acari," No. 1, The Genus Demodex (Owen), Hirst describes varieties of the parasite as it affects various animals, and gives a description and illustration of the Demodex Equi and the result of infection on the horse.

A report on the same subject by Croveri and Salvistroni, drawing attention to the condition in Somaliland, is noted in the "Review of Applied Entomology," Vol. 7, Series B, Part 10, October, 1919.

During the year commencing July 1, 1919, the parasite was demonstrated on forty horses in the Aldershot Command.

Their presence was discovered during the routine examination of more than 220 horses and mules which had shown signs of pruritis, and, as no other parasite was found, the Demodex was credited with producing the lesions and symptoms described below.

Hirst (as quoted) states that the condition is often seen as an infection with other forms of mange. We have found one case in which the same animal was infected with Demodex and parasites of the family Sarcoptidæ. He further states that Col. W. Pallin, quoted by Major Wadley, found Demodex in 4.52 per cent. of a very large number of skin scrapings taken from Army horses.

It should be stated at once that in no case has the disease produced such marked symptoms as are commonly met with in the dog, but, nevertheless, the majority of cases show obvious lesions which one would be far from justified in neglecting.

There are two stages in the condition :—The first (the most benign and usually the most recently infected cases) is the stage in which there is no marked pustular formation.

The second is the more advanced stage, where the pustular formation is the most striking symptom.

In the first condition there is nearly always excessive pruritis. It is, however, worthy of note that few horses are so irritable that they will mutilate themselves, as they do when they are affected by the ordinary mange parasites ; it is for this reason that the attention of the layman is not immediately drawn to the condition.

When thoroughly examined, however, certain areas of the skin are found to be decidedly more irritable than others ; these are generally on the neck, withers and croup, the lower parts of the belly being rarely affected at this stage.

The lower third of the neck is the common site of origin.

On ocular examination little can be seen, though epidermal scales will be noticed to be more numerous than is usually found on a well-groomed horse.

If grooming has been neglected the accumulation of the scales is very noticeable, and is often considered to be the sole cause of the pruritis.

On manipulation of the skin it will be found that no thickening has taken place, and the presence of the minute pustules cannot always be detected.

Even at this stage of the disease from an ordinary scraping of the skin the parasite can be microscopically demonstrated.

Many cases, if untreated, will remain in this condition for weeks before the appearance of pustules.

The second, or pustular stage, may appear a considerable time after the original infection has taken place, or may be the first stage that is noticed, not always, it is thought, through carelessness of observation, but because, in certain horses, pustules appear very soon after the primary infection.

The cutaneous irritability at this stage is very much less marked, but a certain thickening of the skin will always be noticed ; the condition, moreover, assumes a more localised character, although there is a tendency to spread downwards over the trunk.

The base of the neck and withers is again the most common site affected, and from here the pustular area spreads downwards over the breast and backwards on to the lower scapular region.

The skin round the base of the tail is also commonly affected, but the lesions from this site seldom seem to spread.

It has been the exception, more than the rule, to find the lips and the nostrils affected, although it has been often noticed on the skin round the base of the ears and over the forehead, the tendency here being to spread down the cheek.

In this stage the skin is always thickened, but the thickening is not of a superficial nature ; in fact, the actual superficial layers appear to be very little changed.

The pustules have no tendency to coalesce, but can usually be felt as distinct excrescences.

A droplet of sebaceous looking pus can be expressed from them at the earliest stage of formation, but later on the exudate forms into a hard, tenacious crust.

At no time has the discharge been so great as to cause the moist condition of the skin seen in the advanced stage in dogs.

Unlike the other forms of mange, there appears to be a greater tendency for the disease to occur during the summer months than in the winter.

Clean, well-groomed horses seem to be as often affected as ones less well-cared for.

Practically all the cases have been horses in exceptionally good condition.

The progress of the disease is always slow.

We were unable to find or obtain any evidence of the disease being of a contagious nature, inasmuch as practically all the cases were isolated ones from different units and areas, and there never appeared to be any marked tendency to spread within a unit.

In the microscopical examination of the scrapings the usual procedure of boiling in 10 per cent. caustic potash solution, centrifuging, and examining the deposit was adopted.

The Demodex is very much smaller than the Sarcopt Equi, being only 250 to 300 mm. in length, and is consequently very easily missed if the slide is examined with a 2-3 objective, the one usually used when examining for ordinary mange parasites.

Various treatments have been used ; for those subjects in which there has been no pustular formation cure has been produced after one or two applications of any ordinary skin dressing, those of sulphur having a non-irritant oil as a base have given the quickest and best results.

On the other hand, when the disease has got to the pustular stage great difficulty is experienced in curing it.

Though the areas affected always appear localised, if treated locally it will be found that fresh areas of infection appear.

It is therefore advised that, whatever dressing is used, it should be applied generally, and the thoroughness of the application is as important in treating this condition as it is in the more common forms of mange.

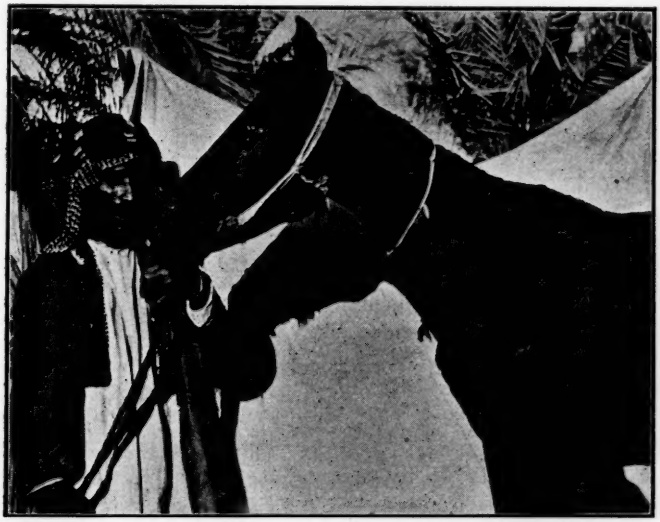
Relapses after an apparent cure have not been uncommon, and

all sign of the disease should have disappeared for a week or two before one could consider the animal as being cured.

A TYPICAL REACTION TO MALLEIN.

By J. R. HEWER, M.R.C.V.S.
(*Late Captain, Royal Army Veterinary Corps, Swindon.*)

THE photograph herewith, which was taken in Mesopotamia, at the twenty-fourth hour after test, is interesting, as it shows clearly a typical reaction to both eye and neck tests, which were done at the same time with ordinary Mallein, 1 c.c. being used, two drops being injected into lower eyelid and remainder into neck.



TYPICAL EYE AND NECK REACTIONS TO MALLEIN.

The subject was an Arab "Gharry" pony, and was tested with all the other ponies at Busrah on account of a serious outbreak of glanders occurring among them.

Needless to say, the animal was destroyed.

INFLAMMATION OF THE FASCIA OF THE THIGH.

By CAPT. J. R. HODGKINS, D.S.O., F.R.C.V.S.
(*Royal Army Veterinary Corps, Secunderabad, India.*)

THE subject of this inflammation of the fascia of the thigh was a nine-year-old polo pony. He was bought by his present owner in the beginning of 1920. The pony at the time was being played in a

tournament, and suddenly went lame, in consequence of which he was unable to travel to his new home for two weeks.

On arrival he was still lame on the near hind. Examination showed a swelling on the inner surface of the thigh. The swelling was painful to the touch, and about the size of the palm of a man's hand.

Treatment was simple. Fomentations, hand rubbings, and light exercise relieved the lameness in about three weeks. But the swelling remained. Its character, however, was changed. At the end of three weeks it was hard to the touch, almost bony in consistence. There was no longer swelling immediately under the skin. The condition existing was now obvious—an ossification of the fascia, the result to its previous inflammation.

The case was interesting and satisfactory, for the pony got into work and did very well. Four months later he was sent again with an identical swelling of the off thigh, and in addition an inflammation of the fascia of the outer surface of the thigh.

Treatment was on the same lines, a mild liniment being used to facilitate the massage. The swelling of the inner surface of the thigh of the off leg went through exactly the same phases as that of the near. The pony has now two " plaques " of ossification, one on each thigh. He is perfectly free from lameness.

It remains to say that the inflammatory condition of the fascia on the outer side of the off thigh subsided without leaving any thickening such as is to be found on the inner surface.

A TREATMENT OF THE DIFFERENT FORMS OF MANGE AND OTHER PARASITIC SKIN DISEASES OF HORSES AND MULES WITH A COMBINATION OF CALCIUM SULPHIDE AND HORSE FAT.

By Capt. R. P. HOLMES, M.R.C.V.S., D.V.S.M., N.D.A.,
Royal Army Veterinary Corps, Aldershot.

In the treatment of mange there are many formulæ used, each of which has met with a certain degree of success. I write these few lines with the object of placing before members of the profession some of my experiences in the methods employed in the treatment of mange and other parasitic skin diseases of horses and mules.

Before the animals are dressed in any way, it is important that an accurate diagnosis should be made as to the nature of the skin disease from which they are suffering. This is done by taking scrapings from suitable areas of the skin where the lesions are most prominent. Having selected the areas, the hair over the parts should be closely cut with scissors, then each area carefully soaked with a 7 per cent. solution of liquor potassæ, and scraped with a sharp scalpel down to

the true skin until bleeding is produced. The whole of the loose hairs, scabs, blood, and scrapings are collected in a large strong test tube, and more liquor potassæ of the above strength added. This is boiled for from seven to ten minutes, and then centrifuged for five minutes, and the resulting sediment spread out thinly on glass slides and examined under a 1-in. objective for parasites or their eggs.

Preparation of the Calcium Sulphide.

In the treatment which is the subject of this article calcium sulphide forms the basis of the dressing, and the following is an account of the method employed in preparing it on a small scale :—Two and a quarter pounds of sulphur and one pound of quicklime were mixed together dry in a large bucket, and hot water was gradually added, being constantly stirred until the lime was slaked and the lime and sulphur were reduced to an even paste. The contents were then made up to two gallons with more water, and the bucket placed over a hot stove or fire. This was then boiled for about three hours until it thoroughly combined and formed a dark reddish-brown solution. The solution should be constantly stirred during the process of boiling, and when this is completed it should be made up to the original two gallons with water. For preparation on a larger scale a Sawyer's stove, or an ordinary copper is very convenient, but the solution, when prepared, should be immediately removed on account of its corroding effect on the boiler.

Treatment of Sarcoptic Mange.

In the treatment of sarcoptic mange, as in the treatment of all other forms of parasitic skin disease, the affected animals should be closely clipped all over, manes hogged, and tails trimmed short, and all the hair carefully collected and burnt. The animals are then thoroughly washed with warm water and soft soap to remove all scabs, scales and loose hair, scraped down, and then lunged to stimulate the action of the skin, when the calcium sulphide and horse fat dressing should be applied in the following proportions at a temperature of 100° F. :—

1 gallon of calcium sulphide solution.
2 gallons of water.
2 gallons of horse fat.

When the dressing has been made up in the above proportions, it is important that the ingredients should be thoroughly mixed together by constant stirring, and kept at 100° F. by heating over a stove whilst the dressing of the animals is in progress. A paraffin stove with a double burner is the most convenient apparatus for warming the dressing, as the flames of it can be regulated so as to keep the

mixture at the desired temperature. It will be found that 1½ pints of the above mixture is sufficient to give one animal a good dressing all over. When the dressing has been applied it should be allowed to remain on the skin for nine days and rubbed well in with the hands daily after lunging. A little fresh dressing may be added on the third and sixth days following the first application. On the tenth day the animal should be thoroughly washed with warm water in order to remove the whole of the sulphide dressing ; then scraped, and exercised until dry, when it should be well groomed and the mange dressing reapplied in the same proportions, and the above treatment continued for another nine days. Whilst this is being done the stalls, mangers, walls, floor, and bales, etc., should be thoroughly disinfected with a powerful blowlamp flames, and creosol solution should be freely used on the floors. No bedding should be allowed during the period the animals are under treatment.

Treatment for one month, or three separate courses of dressing, will almost invariably result in a radical cure, but it is absolutely necessary for success that everything should be carried out in a most thorough and systematic manner. After the third dressing the animals should be placed under observation for at least 14 days. With exceptional cases it may be necessary to repeat the treatment, but this is generally only necessary when either the first course of treatment has not been thoroughly carried out or the animal has become reinfected.

Treatment of Psoroptic and Symbiotic Mange.

The treatment of psoroptic mange should be carried out on similar lines to that described for sarcoptic mange, but usually two courses of dressing covering a period of three weeks is sufficient, though it is advisable to thoroughly examine the animal's skin after the mange dressing has been washed off for any definite lesions, and if these are present the affected areas should be scraped, and the scrapings treated and examined microscopically for parasites or their eggs, and if any be found a third course of dressing should be continued immediately.

In the treatment of symbiotic mange, which is chiefly confined to the legs, one course of dressing is usually sufficient, and this should be allowed to remain for 12 days, a little fresh dressing being added on the fourth and eighth days after the first application. The exercise should be carried out on a clean track, special care being taken to keep the legs perfectly clean whilst under treatment. The dressing should be well rubbed in daily, using an old dandy brush for the purpose, which should occasionally be rinsed in a bucket of hot water ; this has the effect of melting the horse fat and greatly assists in distributing the dressing over the affected parts. In badly affected animals I always

consider it advisable to dress the whole of the body in addition to the legs on the first application, as in these cases I have often found symbiotic parasites and their eggs in scrapings taken from different parts of the body, especially from the shoulders and hind quarters, when only the legs were apparently affected.

Disinfection should be thoroughly carried out with a blowlamp, and all bedding should be burnt, and no more allowed until the animals are completely cured, as this is the chief source of infection, especially in symbiotic mange. In the case of sarcoptic and psoroptic mange strict attention should be paid to the thorough disinfection of horse rugs, blankets, saddles, and grooming kit, etc. The leather work of harness and head stalls, etc., should be treated with paraffin emulsion consisting of one pint of paraffin oil, one pound of soft soap in one gallon of water.

Treatment of Demodectic Mange.

During the last three years I have met with several cases of pruritis in horses and mules caused by the parasite *Demodex folliculorum*, as revealed by microscopical examinations of scrapings taken from different parts of the body where the pruritis was most evident. The lesions which appear in the form of small petechial eruptions are usually confined to certain areas, generally around the mouth, on the sides of the face, and along the withers and back. As a rule there is very little pruritis, and the animals seldom rub themselves but respond to scratching. It appears to attack isolated cases and is not very infectious, as animals working in direct contact with infected cases for long periods often remain unaffected. I have never noticed any definite pustules in horses or mules like that which is so commonly associated with this form of mange in the dog, though the parasites appear to burrow down into the sebaceous glands of the skin, and in this respect render treatment very difficult, as washings with creosol solution, cattle dip, or Mykrol in suitable dilutions only have the effect of destroying the surface parasites. The best form of treatment is to clip the animal all over and wash with soap and water, then apply a dressing of calcium sulphide and horse fat in the same proportions as that employed in the treatment of sarcoptic mange. Two courses of dressing extending over a period of three weeks will generally effect a cure.

Treatment of Forage Acari Infections.

The preliminary step to be taken in the treatment of pruritis due to forage acari is to clip the animals all over, singe, then wash with soap and warm water, and exercise until dry, afterwards applying a dressing of calcium sulphide and horse fat in the following proportions, warmed to a temperature of 100° F. :—

1 gallon of calcium sulphide solution.
3 gallons of water.
2 gallons of horse fat.

The dressing should be well rubbed in daily with a dandy brush after exercise, or the animal may be lunged for ten to fifteen minutes, which has the effect of stimulating the action of the skin by sweating and at the same time warms the dressing, rendering it easier to distribute over the affected parts. The dressing should be allowed to remain for a fortnight, and a little fresh dressing may be added on the fourth and eighth days following the first application, but this is only necessary with badly infected cases. One pint of the above dressing is sufficient to dress one animal all over, and one course of dressing extending over a period of 14 days almost invariably results in a cure.

TREATMENT FOR LICE.

Various dressings have been recommended for the treatment of lice, such as suitable dilutions of creosol, creolin, lysol, cattle dip, and Mykrol; also decoctions of Stavesacre and tobacco, all of which have been proved by their use to be most effective in the destruction of lice, but the eggs, or "nits," have great powers of resistance, and remain unaffected by most dressings, hence the prolonged period of treatment often required in badly affected cases in spite of the most careful vigilance and rigorous methods of treatment. With particular reference to these badly infected animals, which have so often proved very obstinate cases to treat, in order to effect a cure in a short time, I have used with considerable success a dressing of calcium sulphide and horse fat in the same proportions as that used in the treatment of forage acari. This dressing has a marked effect on the eggs, or "nits," and appears to destroy them by a process of suffocation, as lice are very rarely seen after the dressing has been applied. The affected animals are clipped all over, singed, and washed with soap and water, scraped down, and exercised until dry, when the dressing should be immediately applied warmed to a temperature of 100° F. One dressing is generally effective, and almost invariably results in a cure in from six to eight days. The dressing should be applied with an old dandy brush about half worn, being rubbed well in daily with exercise, and should be allowed to remain until the lice and eggs have disappeared, when the dressing should be washed off with soft soap and warm water. In exceptionally bad cases it is sometimes necessary to add a little fresh dressing about the fourth day following the first application. It will generally be found that when the dressing has been rubbed in well for two or three days that the eggs loosen their hold and are easily removed by grooming. From records taken of my personal supervision and treatment of over 200 cases by the above method, all

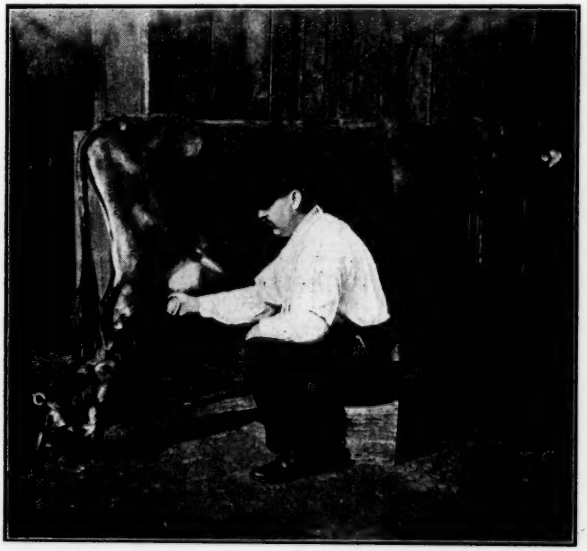
of which were very badly affected with lice, the average time under treatment was eight days. Whilst some of the milder cases were cured in four days, a few exceptionally bad cases were under treatment for a period ranging from fourteen to seventeen days.

When using a dandy brush for rubbing in the sulphide dressing, it is good practice to keep the brush warm by frequently rinsing it in a bucket of hot water. This has the desired effect of melting the horse fat which clings to the hairs and greatly facilitates the distribution of the dressing.

An important point in favour of the use of a combination of calcium sulphide and horse fat as a dressing, in addition to its remarkable qualities as a parasiticide, is that it also produces a beneficial effect on the skin by keeping it soft and supple, and where patches of hair have been removed by constant irritation and rubbing in the earlier stages of the disease, it tends to promote the growth of new hair.

DIRECT FROM PRODUCER TO CONSUMER.

THE photograph here reproduced was sent to us by Dr. Frank Attwood, V.S., New Haven, Connecticut, U.S.A., and demonstrates clearly that the consumer in this instance, at all events, has no thought



of Milk and Dairies Bill, Pasteurisation, sterilization, or anything else beyond an ardent wish to get it uncontaminated by unclean vessels, and, in fact, just merely " direct from producer to consumer."

IRRITATION BY TICKS ON THE EARS OF THE DOG.

By FREDERICK HOBDAY, F.R.C.V.S..
London.

On several occasions lately we have had dogs brought to hospital with the history of a persistent shaking of the head and ears, the former being held on one side. Usually, too, with the history that the owner had had the dog away for a holiday in the country where there was a common on which it had habitually been taken to exercise.

On examination of the under surface of the ear flap we have found specimens of one or more ticks firmly attached, and a specimen which I sent to Mr. Noel Pilliers, F.R.C.V.S., for examination was named as the *Ixodes Hexagonus.*

AN INTERESTING CRYPTORCHID OPERATION.

By GEORGE HOWIE, M.R.C.V.S.,
Alford, Aberdeenshire.

Subject.—A two-year old Clydesdale colt, from which the left testicle had been removed a year previously. The animal was vicious, and could not be kept in a field when other horses or mares were near. Having been cast, chloroformed, and secured in the manner adopted for rigs, the skin of scrotal region was painted with iodine tincture and the incision made carefully in the usual manner. The subcutaneous tissues were separated, and the external abdominal ring explored without finding either testicle or cord. The abdominal cavity was then penetrated, and after some search the cord was encountered. On following this up the huge testicle was found rolling about amongst the viscera in the neighbourhood of the right kidney. It was quite free, not adherent to the peritoneum at any point, and globular in shape, being about the size of a child's head. To the feel of the fingers it was like a large cyst, having its walls composed entirely of bone or cartilage, and at no point could the wall be penetrated by scraping with the finger nail. An attempt to puncture it with a trocas was ineffectual owing to the difficulty in keeping the testicle against the abdominal opening and to the density of the exterior. Three ways out of the difficulty suggested themselves: (1) To stitch up the scrotal wound and leave the animal a " rig " ; (2) to enlarge the opening so that the organ could be removed, risking descent of the viscera; (3) to sever the cord and leave the testicle in the abdominal cavity. The latter alternative was adopted, and a loop of the cord, which, fortunately, was of considerable length, was pulled up through the canal, a blunt hook being fixed in the flexure of the cord, the ecraseur chain slipped over this and on to the doubled cord. A length of some three inches was in this way removed. No further

examination of the testicle was made, and the wound was packed with gauze, the scrotal skin being closely sutured.

Recovery was uneventful. The horse is now three years old, and in daily work, being quite docile and showing no sexual propensities.

The case recorded by Professor Hobday on page 12 in the January, 1920, number of the VETERINARY JOURNAL reminds me of a similar one which occurred in my own practice a short time ago.

PROLAPSE OF THE VAGINA. OPERATION. AN UNTOWARD SEQUELA.

BY H. R. SEDDON, B.V.Sc.,
Veterinary School, Melbourne University.

A YOUNG Pointer Bitch was admitted to the hospital on August 11, with a prolapse of the vagina. The organ was congested and œdematous, and, where it had come in contact with the ground, was ulcerated.

The *History* was meagre. Five days previously the owner had left the bitch, supposed to be a maiden and showing some signs of heat for the first time, shut up, and when he returned some hours later she was running about the yard and the prolapse was evident. The owner was positive that the bitch had not been lined during his absence, as there were no other dogs on the place, and the gate of the yard was locked. Notwithstanding this assurance on the part of the owner the condition warranted the belief that the bitch had been served by a dog and injured to some extent.

Treatment was commenced at once. The bitch was given morphine sulph., grs. 3 hypodermically, and the prolapse reduced; a plug of gauze was inserted, two silver wire sutures put in the vulva and a bandage applied. The bandage was removed daily and the vagina syringed out with solution of Tannic Acid, but this treatment did not meet with permanent success, so that nine days after admission it was decided to operate on the prolapsed organ.

Operation on August 20. The animal was given morphine grs. 3, anæsthesia was completed with ether, and the parts cleansed. A circular incision was made through the wall of the vagina immediately anterior to the meatus urinarius, the vagina drawn down as far as possible, the uterus ligated and the vagina and portion of the uterus amputated. The stump was pushed back, the cavity swabbed out, and the anterior end of the remaining portion of the vagina closed with a purse-string suture.

The end of the vagina healed rapidly, and the bitch did well for about a fortnight, when she suddenly went off her appetite.

Other symptoms then developed, suggestive of distemper. Diarrhœa appeared, and there was some discharge from the nose. Medicinal treatment was tried and met with some success, but in spite of all efforts the animal became very emaciated and three months after the operation was destroyed.

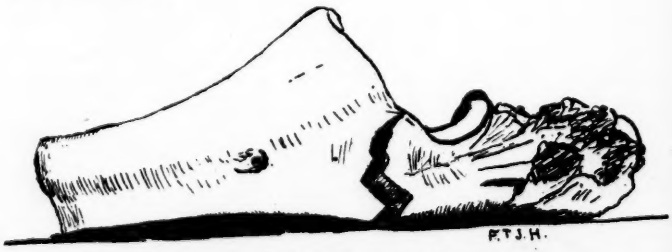
Post-mortem examination showed extreme emaciation; the vaginal wall had completely healed; there was no sign of septic infection in the pelvis, and the stump of the uterus had healed. The horns and body of the uterus were greatly distended, tense, and contained a muco-purulent material, the body of the uterus being about 2½ inches in diameter and the horns about 1¼ inches in diameter.

It was thus apparent, therefore, that the case had developed into a pyometra, and the closing of the uterine exit and damming back of the infection had resulted in a general cachexia. It is interesting to speculate as to the origin of the infection. Was it primary to the prolapse, or was it secondary? All that can be said is that the history of good health up to the appearance of the prolapse was definite and that physical examination at the time of operation did not discover any enlargement of the uterus or vaginal discharge more than was compatible with the local condition.

A FRACTURED OLECRANON.

By W. D. WALLIS, M.R.C.V.S.,
Barnet.

Although one would think that, on account of its exposed and prominent position, fracture of the olecranon would be met with frequently, it is not often that a case is reported or commented upon in the Veterinary press, and for that reason I thought the enclosed to be interesting.



Transverse Fracture of the Olecranon.

The patient was a nine-year-old cart mare, which was being utilised in the shafts of a heavily loaded hay cart. Something frightened her and caused her to turn round suddenly, the result being that the cart overturned and she was pulled down with it. Upon being released

she held up the near fore leg, but when made to progress there was very little lameness.

Crepitus, however, together with pain and swelling of the part revealed a fracture of the olecranon, and she was destroyed.

Upon cleaning out the specimen the fracture was found running transversely across it as shown in the sketch.

FISSURE OF THE MOLAR TEETH.

By Wm. PAUER, M.R.C.V.S.,
Blackwater.

Subject.—Chestnut mare pony, four years old, in good condition; affected with a slightly offensive nasal discharge from the right nostril; was sent to me for treatment in October, 1913.

History.—Had been sent over to owner from Ireland a few months previously, he being of the opinion that she had been injured on the journey. He said that there was a distinct enlargement of the facial bones below the right eye—this had now disappeared, but the nasal discharge was getting gradually worse. Usual remedies, such as fomenting and steaming the head, had been tried with no good result.

Diagnosis.—Catarrh of the mucous membrane of the frontal and maxillary sinus.

Treatment.—The frontal and maxillary sinus were trephined and irrigated with a creolin solution twice daily; a little pus occasionally came away from the lower opening. After a week's treatment there was no improvement, and I then opened the lower maxillary sinus, and, much to my surprise, found it filled with decomposed food. On examining the mouth, transverse fissure of the fourth upper molar was detected, and it was evident that purulent periostitis had taken place. The fourth upper molar on the opposite jaw was similarly fissured. With a little difficulty, the decomposed food was removed from the sinus, but after each feed freshly masticated food had collected again.

My opinion was that a cure was not likely to be effected, even if the molar was removed, and the owner decided to give up further treatment and get rid of the pony, since when I have heard no more of it.

Remarks.—The pony fed well and showed no symptoms of tooth trouble. The split in the two molars was identical, and would almost admit my little finger. Under ordinary circumstances, examination of the mouth would have been made at once, but the owner put me off my guard by being convinced that the pony had been injured on the journey—and this seemed feasible.

OPEN SHOULDER JOINT (HORSE).

By Capt. J. R. HODGKINS, D.S.O., F.R.C.V.S.
(*Royal Army Veterinary Corps, Secunderabad, India.*)

The shoulder joint of the horse is so very well protected that it is seldom that the capsule which encloses it is ruptured. In 1912 I described a case in, I think, the *Veterinary Record.* I had not seen one before this nor since until the present case. The previous case was a puncture which I saw very early, and which made a perfect recovery. This one, unfortunately, was not so simple, nor its termination as happy.

A bay Australian trooper (mare) of very quiet disposition, but frequently in trouble, received a very severe kick just above the point of the shoulder.

From the first the injury was very painful, the swelling extensive and intense, the whole limb was "dropped," with the toe withdrawn so that the face of the hoof was almost on the ground. There was no leakage from the joint until the third day, when synovia was present in large quantities. This was controlled comparatively easy with a bin iodide blister, but a bloodstained liquid continued to drip. The animal was still excessively lame, and atrophy of the scapular muscles was very marked. It appeared more than probable that an arthritis was present, and that no useful purpose would be served by further treatment. The animal was destroyed.

Post-mortem Examination.—On removal of the skin, bruising was apparent over a large area. There was a hole between the external inferior attachment of the supraspinatus and the biceps muscles leading into the joint. A fragment of bone was found detached from the head of the humerus. The joint cavity contained a dirty yellowish fluid. The synovial fringes were thickened and gelatinously infiltrated. Proliferation of the cartilage at the edge of the articular head of the humerus had commenced. A considerable area of cartilage was eroded from the head of the humerus, whilst that in the articular cavity of the scapula was intact. This was probably owing to the fact that they were no longer in contact since the rupture of the capsule.

A SEVERE OUTBREAK OF MYCOTIC APHTHA IN SHEEP.

By J. F. D. TUTT, M.R.C.V.S., F.R.M.S., F.Z.S.,
Winchester.

Beyond an abstract from Circular No. 54, Bureau of Animal Industry, U.S.A., August 10, 1914, very few records appear to have been published on this condition, and as it is probably rather uncommon, at any rate in this country, the following account of a recent severe outbreak that came under my notice may prove of interest.

The sheep (500 ewes and lambs) were on vetches, on recently

claimed land, and thistles affected with blight in large numbers; in fact, there were more thistles in some parts than vetches. After a comparatively long spell of dry weather, the deluge that has marked the July of this year started, and within a few days the first symptoms were noticed in a few of the ewes, this rapidly spreading until over three hundred of the flock were affected.

Symptoms.—There were certain differences between the lesions as encountered in the ewes as compared with the lambs.

In the Ewes.—The first noticeable feature was marked swelling of the lips and nostril, followed by a slight cough, and a pus-like discharge from the nostril. Several " pimples " formed on the lips, enlarged, and ulcerated, exposing red surfaces. A few were present inside the lips, but none were found on the dental pad or tongue. A glairy very offensive salivary discharge was also present. Feeding was not seriously interfered with, and loss of condition practically negligible. The lip lesions healed on an average from seven to fourteen days, and the swelling of the lips and nostril gradually diminished as the " pimples " ulcerated. No foot lesions were met with in the ewes.

In the Lambs.—Mouth lesions were encountered in some cases, as in the ewes, but by far the commonest seat was the limb below the fetlock, and in every case, with only one exception, it was the front limbs. In this case the lesion was more of a vesicle than a pustule or pimple, and was found round the coronet, between the digits, and at the junction of the hoof with the limb. In many cases only one limb was affected. Lameness was practically absent, and there was no shaking of the feet. About fifty lambs in all were affected, and the one death that occurred during the course of the disease occurred amongst them, and in this case there was only one lesion on the foot.

Treatment.—The affected animals were immediately isolated from those not affected. When first seen only about half-a-dozen ewes were affected, but within a week over 300 were affected, and as there was a paucity of pasture it was found impossible to move them off the pasture they were already on, as the only other ground available was grass land, and it was found that, when put there, those affected with mouth lesions were unable to feed, while on the vetches they were able although, of course, with a certain amount of difficulty, to do so. Trough feeding was discarded for a similar reason, so it will be seen that the second and apparently obvious line of treatment, *i.e.* to remove from the affected pasture, was impracticable, and no doubt accounted, in no small measure, for the tardy recovery in some cases.

In the Ewes.—The mouth and inside the lips were thoroughly washed twice a day with lin. saponis c. myrrh et Benzoin (Hewlett) in the proportion of 1 drachm to 4 ounces of tepid water, and then a lotion

containing alum (dispensed as liq. alumini acet.) was applied to the ulcerated portions. No internal remedies were given in either ewe or lamb.

In the Lambs.—Where mouth lesions were present they were treated similarly to the ewes. The foot lesions were treated by immersion in foot baths for five minutes twice a day of permanganate of potash, and afterwards dressed with alum lotion.

Duration.—The flock was free after a period of three-and-a-half weeks from the outbreak of the first case. During this time the sheep remained on the pasture.

Remarks.—It is well known that aphtha occurs amongst sheep when they are feeding off stubble, and also on pastures affected with "red weed."

In this case, it would appear that the enormous thistle crop was responsible, as the prickly leaves, no doubt, caused small lacerations in the skin and so directly inoculated the blight with which they were heavily infected.

It would be interesting to know if any other practitioner has encountered a similar outbreak.

THE ADMINISTRATION OF CHLOROFORM TO CATTLE.

By W. WALLIS, M.R.C.V.S.,
Barnet.

Now that the Animals' Anæsthetic Bill has become law it has become compulsory to administer a general anæsthetic to cattle for certain operations, and I am surprised to read in the professional journals that there is a widespread opinion that the use of chloroform for cattle is exceedingly dangerous.

It has been my practice to use it very frequently during the past twenty years, especially in cases of dystokia and coersion of the uterus. The method I have adopted has been to tie the animal to a post or to the front of the byre or loose box, by means of a rope placed round the horns, and to apply a couple of ounces of chloroform, to commence with, on a sponge placed in the canvas purse string end of a Cox's inhaler, the latter being placed over the whole of the muzzle.

I then take hold of the tail, and in the majority of animals, in about five or seven minutes, the cow will sway a little from side to side and quietly sink down. I then wrap a sack or light rug around the mask and proceed with whatever the operation is in hand.

As a rule, two ounces given in this way will produce a satisfactory anæsthesia lasting about 15 or 20 minutes, but if necessary I add more chloroform in half ounce doses.

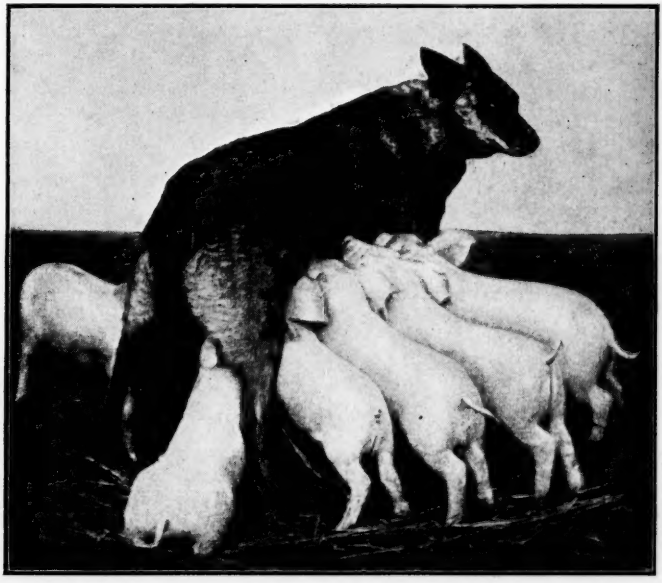
When the operation is completed, I remove the mask and allow

the cow to lie quietly until she is fit to get on her feet. When "coming to" I have noticed that one of the first symptoms is that the patient will commence to kick the ground, or anything, such as boards or stones, which are within range.

I have anæsthetised a large number of cases, without a single fatality, and I shall certainly never again attempt a case of dystokia or everted uterus without first applying the chloroform inhaler.

BITCH SUCKLING SIX LITTLE PIGS.

THIS photograph, brought to our notice by the Editor of "Our Dogs," and for which we are indebted to the courtesy of the Editor of a French paper, *La Vie à la Campagne* represents an Alsatian wolf-



AN UNUSUAL FOSTER MOTHER.

hound bitch, whose puppies had died, bringing up six little pigs who had, through the death of the sow, been rendered motherless. Bitches will often bring up kittens and other young ones of the canine or feline species, but the rarity of allowing little pigs to suckle in this way makes the photograph of more than ordinary interest to the veterinarian.

ECONOMICAL USE OF FEEDING STUFFS.

By J. J. GRIFFITH, B.Sc.

(*Lecturer and Legal Adviser in Agricultural Chemistry, University College of Wales.*)

(*Continued from page* 357.)

The following table shows the average composition of some of the samples :—

Water	11.56 per cent.
Albuminoids	20.62 ,,
Oil	4.63 ,,
Carbohydrates	52.79 ,,
Fibre	4.41 ,,
Ash	5.99 ,,

The samples represented meals which were sold at prices ranging from 25s. to 38s. per cwt. Most of them were more or less suitable foods for calves, but, in the majority of cases, their prices were, to say the least, exorbitant. Possibly farmers would feel less inclined to purchase these meals if they realised that 32s. per cwt., a price commonly paid for them, is equivalent to £32 per ton. Most people will readily agree that it would be difficult to think of a possible mixture of foods whose ingredients would justify anyone in paying for it at the rate of £32 per ton. No farmer should experience any difficulty in preparing a very much cheaper mixture to be used as a calf meal. For instance, a mixture of oat meal, maize meal and linseed makes a very efficient meal for calf-rearing. If the calf tends to suffer from diarrhœa a little wheat flour may be added. For further information on this subject see Leaflet No. 142 of the Board of Agriculture.

Some Feeding Stuffs which are not Widely Known.

In order to assist farmers to widen the scope of their choice of concentrated foods the following observations may be made regarding various cakes and meals which in the past have been but very little used within the College area.

Earthnut, soya bean, cocoanut and palm kernel cakes are very useful concentrated foods which, until quite recently, were almost unknown to farmers in this country. They have been extensively used with very good results by German farmers for many years. Since the outbreak of war Germany has been unable to import these foods, and, consequently, they have been put on the market in this country in much larger quantities than has ever been the case before. Feeding experiments have conclusively shown that these foods may successfully take the place of linseed cake and the cotton cakes, especially for fattening animals and dairy cows.

Gram meal is used to some extent in some Mid-Wales districts. It is somewhat similar to beans and peas in composition. It is a useful meal in cases where it is advisable to raise the albuminoid content of a ration.

Bye-Products from Maize.

In the manufacture of starch and other substances from maize various residues or bye-products are obtained which are largely used for feeding. The following are some of the most important of these bye-products :—Maize bran, maize germ meal, maize points, gluten feed and gluten meal. The chemical composition of these feeding stuffs is very variable. Generally speaking, they contain less carbohydrates but more oil and albuminoids than maize meal, and they usually contain a higher percentage of fibre. They have been found to give good results when fed to dairy cows. On account of their variable composition they should be bought on a guaranteed analysis. It should be observed that whereas maize meal is marketed in sacks containing 240 lbs. the weight per sack is variable in the case of the bye-products, and is often much lower than 240 lbs.

Valuation of Foods.

For practical purposes the "Food Units" system is the simplest method to ascertain which of several feeding stuffs is relatively the cheapest.

Both the albuminoids and the oil foods may be assumed to be approximately 2½ times as valuable as the carbohydrates. So, the number of " food units " per ton may be obtained by adding together the percentages of abluminoids and oil, multiplying the result by 2½, and adding the product to the percentage of carbohydrates.

Example.—

	Earthnut Cake.	Decorticated Cotton Cake.
Albuminoids %	47	40
Oil %	8	9
Adding	55	49
	2½	2½
Multiplying	110	98
	27½	24½
	137½	122½
Carbohydrates %	24	27
Food Units	161½	149½

Therefore earthnut cake and decorticated cotton cake contain approximately 161 and 149 food units respectively. Consequently when the market price of decorticated cotton cake is found to be, say, £12 per ton the equivalent price of earthnut cake would be—

$$\frac{12 \times 161}{149} \text{ @ £13, approximately, per ton.}$$

So, if earthnut cake could be purchased at the time at a more favourable price than £13 per ton it might be chosen in preference to decorticated cotton cake.

It is only in cases where the foods to be compared are of a similar nature that this method of valuation is applicable. It would not be

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So, if earthnut cake could be purchased at the time at a more favourable price than £13 per ton it might be chosen in preference to decorticated cotton cake.

It is only in cases where the foods to be compared are of a similar nature that this method of valuation is applicable. It would not be

a reliable method, for instance, to compare the values of cotton cake and wheat bran.

Wherever possible, the *guaranteed percentages* of albuminoids and oil in the foods should be employed in using this system of valuation. The average percentage of carbohydrates as given in the table on page 353 may be used. As a rule it is not possible to calculate the values of compound feeding stuffs because the percentage of carbohydrates is not given. This is one of the many disadvantages connected with the use of this class of foods. For the "food units" value of various foods of average composition see the last column in the table on page 353.

The Use of Bog Hay.

The staple winter food of cattle in many districts within the College area is bog hay, *i.e.*, hay obtained from peaty land. This type of hay is occasionally made up of a fairly mixed herbage, but, as a rule it consists mainly of one species of grass, viz., Purple Molinia (*Molinia cærulea*). It seems to be generally recognised that this kind of hay, especially when it constitutes the bulk of the daily ration, possesses some well marked characteristics in its effect upon stock. Briefly stated, the general opinion seems to be that—

(*a*) its "binding" tendency is greater than that of hay obtained from non-peaty land;

(*b*) for young cattle, say under 12 months old, it is not a suitable food;

(*c*) when supplied to cattle over 12 months old it does not seem to encourage "growth," but it is particularly efficient for maintaining a store animal in good condition and even for bringing the animal from a store to a "half fat" condition.

Several samples of this type of hay, obtained from various districts, have been analysed at the College laboratory. The following table shows the average composition of the *dry matter* of these samples. For convenience of comparison the average composition of the dry matter of meadow hay from non-peaty land is also shown.

	Bog Hay.	Ordinary Meadow Hay.
Albuminoids	8½ per cent.	10 per cent.
Oil	2¼ ,,	3 ,,
Carbohydrates	54½ ,,	47 ,,
Fibre	31 ,,	32 ,,
Ash	3¼ ,,	8 ,,

The above figures indicate that the most distinctive feature of the composition of bog hay is its very low ash-content. This probably, to some extent, accounts for its unsuitability for young stock, and

its inferiority as a food to encourage animal growth. In albuminoids, oil and carbohydrates it does not compare very unfavourably with ordinary hay. It would thus appear that the value of bog hay as food for stock might be greatly improved by including in the daily ration a suitable quantity of other foods in order to make up for some of its deficiences. A small daily allowance of ordinary hay, cereal straw, and roots might suffice for this purpose. It often happens, however, that the supplies of these home-grown foods are very limited in the upland districts where bog hay is extensively used. Under such circumstances it would be essential to use some purchased concentrated foods in order to make the best and most profitable use of bog hay. It should be observed that maize meal alone, on account of its binding tendency and low ash-content, would not be a suitable concentrated food for this purpose. A mixture containing bran, crushed oats and some oil cake such as soya bean cake, earthnut cake or linseed cake, would be likely to give good results. Such a mixture would counteract the astringent properties of the hay and would provide the much-needed mineral matter for bone formation and albuminoids for the formation of flesh.

Cereal Straw Used for Litter.

Much valuable fodder is wasted by using cereal straw as bedding for farm animals. On most Welsh farms the area of land under corn is comparatively small, and therefore most if not all of the straw might readily be used as fodder. In most districts bracken, rushes and any vegetation of waste lands left behind in grazing might be utilised for litter. In this way the farmer might not only add to his supply of fodder but also increase the amount and even improve the quality of his farmyard manure.

Preparation of Foods.

In addition to a consideration of the chemical composition of foods the question of palatability should receive attention in the building up of rations. This is of special importance in seasons such as the present when much of the hay and some of the corn have been harvested under unfavourable weather conditions.

At one time the practice of cooking foods by steaming or by boiling in water was much advocated. In the case of pigs it is still the practice to cook most of their food. As regards the feeding of other farm animals, however, it is only in so far as a certain amount of the concentrated food may be presented in the form of a mash or gruel that there is much cooking practised throughout the country generally. But in many parts of Wales some of the hay and straw are still subjected to a process of cooking. The cooked products are variously named in different localities—'*breci*,' '*swpyn*,' '*swci*,'

'*stwciaeth*' and '*lwts.*' In the preparation of these substances either hay or corn is treated with hot water. The resulting liquid, usually called *breci*, is used to some extent as a substitute for milk in rearing calves. The residue after pouring away the liquid is, as a rule, mixed with a little meal and supplied to the dairy cows. It is claimed that the yield of milk is thereby greatly increased. Sometimes the hay and corn are used in the "long" condition in the preparation of these products, but, as a rule, both the hay and the corn-sheaves are chaffed before the cooking process is carried out. With some farmers cooking is practised only with hay and corn which have been badly harvested and are not relished by stock. In other cases, however, the operation is conducted even when all the hay and corn have been secured in good condition.

At the present time, in view of the great scarcity of labour, one should consider very carefully whether there is sufficient justification for the use of cooked foods. According to the results of the most trustworthy feeding experiments, cooking lowers the digestibility of the albuminoids of hay and straw. This depression in digestibility may counterbalance any benefit which might be expected to accrue from improved palatability. When we consider, in addition, that the operation of cooking coarse fodder involves a considerable amount of labour and expense it is very questionable whether it is wise to recommend the practice under any circumstances.

Generally speaking, the cheapest and most efficient means of making food more attractive and palatable is to provide a satisfactory variety of foods, and adopt a suitable method of blending or mixing various foods. Any hay or straw which is not relished by stock may be chaffed, mixed with pulped roots together with a sprinkling of salt, and the mixture allowed to stand for about twelve hours. As a result of the slight fermentation which is thus brought about, assuming that overheating is avoided, the food is much improved as regards digestibility and palatability. Should the necessary supply of roots not be available treacle, diluted with water, may be used as a substitute. Further, the addition of a little locust bean meal would render the mixed food still more agreeable.

The few suggestions contained in this leaflet may indicate some of the directions in which many farmers might practice greater economy and also attain a greater degree of efficiency in feeding farm animals. At the same time it must be remembered that each farmer must consider for himself what, under his own special circumstances, are the changes and improvements he may effect in the management and feeding of stock so as to bring himself a better monetary return and, at the present juncture, increase the food supply of the country.

Parliamentary.

LIEUTENANT-COLONEL BURGOYNE : To ask the Secretary of State for War whether a veterinary officer has recently been appointed head of the Remount Department in India ; and whether the same system of appointment obtains in Egypt and the Colonies.

Lieutenant-Colonel Burgoyne, Monday, July 26, 1920.

MR. CHURCHILL : I am informed that an officer of the Veterinary Department has been appointed Director-General of Remounts in India. The Deputy-Director of Remounts in Egypt is an artillery officer, and in Mesopotamia is an officer of the Indian cavalry. There are no such appointments under the War Office in the Colonies.

LIEUTENANT-COLONEL BURGOYNE : To ask the Secretary of State for War if he will state the numbers of officers of the Remount Department and the Royal Army Veterinary Corps, respectively, employed in June, 1914, and June, 1920 ; and whether he will state what are the duties performed by the Remount officers which could not efficiently and more economically be carried out by the Royal Army Veterinary Corps.

Lieutenant-Colonel Burgoyne, Monday, July 26, 1920.

MR. CHURCHILL : Number of Royal Army Veterinary Corps officers :—June, 1914, 79 ; June, 1920, 80. Number of officers of the Remount Department :—June, 1914 : At War Office, 4 ; in commands, 112. June, 1920 : At War Office, 4 ; in commands, 111.

All the above Remount officers, with the exception of those employed in the Remount Directorate at the War Office, are officers on the retired list. Retired officers of the Royal Army Veterinary Corps are equally eligible with other retired officers for these appointments.

Correspondence.

THE RAT PROBLEM.

To the Editor of THE VETERINARY JOURNAL.

DEAR SIR,—In the May issue of the Melbourne *Journal of Science and Industry* is a reprint on the Rat Problem, taken from your journal and written by Thos. Parker, F.R.C.V.S. I don't know what issue. He refers to my system of rat destruction and says : " Rodier claims that by the present system or methods more males are caught than females." This is not so and is misleading, as he should have added, " in proportion to the numbers of each sex born," or where the rats are in equal sexes." In the *Melbourne Herald*, of January 15, 1920, is a statement as follows : " From investigations made in the past three weeks it has been discovered that in Melbourne, female rats predominate by about four to one." This great difference of the sexes may

not exist generally, but the fact is established that the rats are polygamous, that is, the females are much in excess of the males. Other counts have confirmed this, not only in Melbourne, but in other places. This shows my statement to be correct, that the males have been killed. Not only that, but because of the rats being polygamous, more females are born than males, and so their numbers increase (in proportion to the numbers of males killed) *ad infinitum*, like the proverbial snowball, or the notorious chain letter—the longer they continue, the greater the increase. Now, why kill the males ?

Another misleading statement is where he says " again it would be equally essential for all districts to be operating continuously in the same direction, otherwise, having regard to the migratory habits of the rodents, the scheme would be hopeless." I take exception to these remarks and say it is not so, and ask him how he knows this. Rats are not naturally more migratory than any other animal ; it is the fact that they live where humanity is dense that causes them to inhabit ships, trains, large cases of merchandise, etc., and so get conveyed from place to place, that has caused them to spread all over the world and gain the reputation of being migratory, which they are not. Any one municipality following the scheme on its own, will get better results than by any other method ; it is also cheaper, quicker, simpler, and free from all drawbacks, a thing no other plan can claim. Not only that, it is the only scheme that works on the mutual benefit system, and so benefits adjoining places at no extra expense. When you consider that the present methods have been in use for 3,000 years (see W. R. Boelter's *The Rat Problem*) and utterly failed, it shows a great want of business acumen to continue using them, as failure is a certainty. There is little doubt that if the authorities governing this rat problem, in any one of the municipalities, would only put their prejudice on one side and give the scheme a fair and straight-out trial on its merits, they would soon get rid of the rats and they would then wonder why so simple and safe a scheme had not been tried before.

Thanking you in anticipation,—I am, yours faithfully,

327, Collins Street, WM. RODIER.
Melbourne, Australia.

NOTICES.

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